

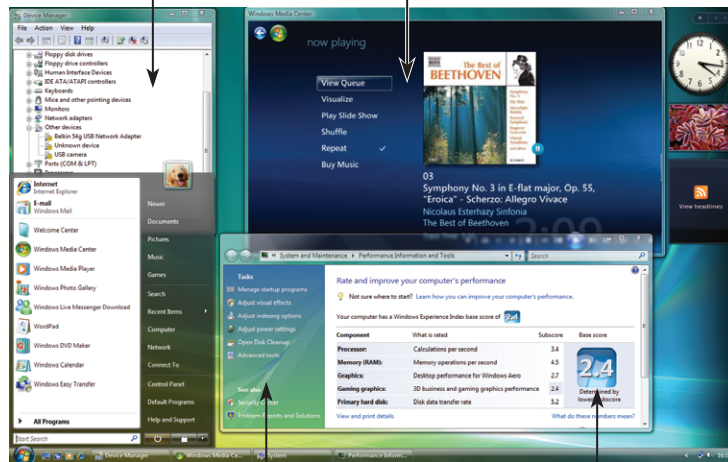
UPGRADE
WORKSHOP

Upgrading to Vista

The latest version of Windows is finally here, but how quick and easy is it to upgrade from your current setup? Chris Finnamore guides you painlessly through the process

DEVICE DRIVERS Vista recognises a vast range of devices, but you'll need specific Vista drivers for some hardware. Check driver availability before you upgrade

WINDOWS MEDIA CENTER Windows Vista Ultimate and Home Premium editions come with Windows Media Center. This provides an easy way to play and manage audio and video files, but you'll need a TV tuner to get the best from it



ADVANCED GRAPHICAL EFFECTS You'll need a DirectX 9-compatible graphics chipset to run Vista's Aero interface, which uses flashy visual effects such as translucent windows

WINDOWS EXPERIENCE INDEX Vista can assess how well it is running on your computer. The Windows Experience Index score can help you detect any performance bottlenecks and plan any necessary hardware upgrades

INTRODUCTION

After five years of waiting, a new version of Microsoft's Windows is here. Windows Vista promises a raft of improvements over Windows XP. As we saw in our full review in last month's *What's New*, Vista is more secure, looks better, is easier to navigate and has great new features such as the Search tool. A full list of features is available at www.microsoft.com/windowsvista.

Even if you're happy with Windows XP, if you want to play future games releases or use the latest software you may eventually have to embrace Vista. However, Vista's system requirements aren't too high, and you shouldn't have to throw out your computer. We've even been able to install and run it on a six-year-old PC. This month's *Upgrade Workshop* guides you through upgrading to Windows Vista, from choosing the right version to installing it and making sure it's running perfectly.

Chris Finnamore
Components and
handhelds expert

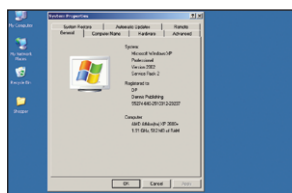


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There are five versions of Windows Vista but one of them, Windows Vista Enterprise Edition, is designed for corporate customers only. The remaining four are Windows Vista Home Basic, Windows Vista Home Premium, Windows Vista Business and Windows Vista Ultimate. There are also discounted upgrade kits available for each edition, which you can use provided you have a valid Windows 2000 or Windows XP licence and installation disc.

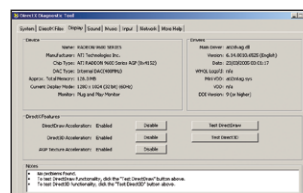
Information on the differences between the versions is available from Microsoft at www.tinyurl.com/m553s. Vista Home Basic lacks many features, including the new Aero interface. Vista Business lacks Windows Media Center. Vista Ultimate has everything, but at a price. Unless you cannot do without Vista Ultimate's business-oriented features such as Remote Desktop or drive encryption, it's not worth the extra money over Home Premium, which we recommend for home users.

Compatibility checklist



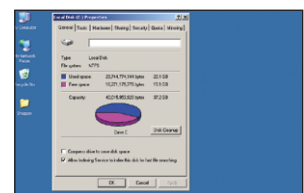
PROCESSOR/MEMORY

To be Vista Capable, Microsoft requires that your PC has at least an 800MHz processor and 512MB of system RAM. To be Vista Premium Ready, it should have a 1GHz processor and 1GB of RAM. To see which processor and how much memory is in your PC from Windows XP, right-click My Computer and select Properties. The processor speed and amount of memory are listed under Computer.



GRAPHICS CHIPSET

Microsoft recommends a DirectX 9-compatible graphics chipset, while a Vista Premium Ready PC needs a 128MB card that supports Pixel Shader 2.0. Wikipedia lists the key specifications of ATI chipsets at www.tinyurl.com/oonlz and Nvidia chipsets at www.tinyurl.com/9fk4j. To find which you have, go to the Start menu and click Run. Type DxDiag into the box that appears, press return and check on the Display tab.



STORAGE

A clean installation of Windows Vista Home Premium Edition needs around 10GB of free disk space. Microsoft recommends 40GB for a Vista Premium Ready PC. We recommend at least an 80GB disk, but if you want to store lots of media files or use Windows Media Center to record TV, you'll need at least 250GB. You'll also need an optical drive that can read DVDs.



You can either install Vista from scratch or, if you have a Windows XP installation, perform an upgrade over your current operating system. If you have a version of Windows XP other than Home Edition, however, you can't upgrade to certain versions of Vista without performing a clean installation. Microsoft provides more information on this at www.tinyurl.com/hfecb.

Installing over Windows XP keeps your documents and program settings as well as your applications, but some existing applications may not work. Any problems with your current installation may also carry over to Vista. We'd recommend a clean installation.

BEFORE YOU START

Check that your PC is capable of running Vista. Microsoft splits the minimum system requirements into two categories. PCs that can run Vista but may not be able to cope with Media Center or the flashy Aero graphical interface are known as Vista Capable. PCs that exceed the minimum requirements and should be able to handle all Vista's features are called Vista Premium Ready. See the Compatibility Checklist on page 159 for system requirements for Capable and Premium Ready PCs. Before you buy Vista, you should check if your PC will run it by installing the Windows Upgrade Advisor. See the box below for details.

Finally, many Windows XP drivers will not work under Vista. We have experienced particular problems with USB and PCI wireless networking adaptors. Peripherals such as a TV tuner or sound card may not work after an upgrade, unless or until the manufacturer releases new Vista drivers. The Upgrade Advisor should warn you of any potential problems, but check that Vista drivers are available for your system's key components before installing the new operating system.

INSTALLATION

1 INSTALLING VISTA FROM SCRATCH

We recommend you perform a clean installation of Vista, but if you would rather upgrade your existing XP installation, start at Step 4. A clean install will wipe your Windows programs, settings and data, so you need to back up all items you can't reinstall. Fortunately, Vista comes with a program to help you with this, which will work on any PC running Windows 2000 or XP. Windows Easy Transfer can copy all your personal files to an external hard disk, USB flash drive or any writable disc. It can also copy across your program settings and restore them to your programs installed under Vista.

Fire up your current Windows installation and insert the Vista installation DVD into your optical drive. The installation program will load. Click the 'Transfer files and settings from another computer' link to load Windows Easy Transfer. Click Next. You have the option to copy the files from one PC to another using a cable or network connection, or to copy the files to an external disk or network location. As you're deleting Windows XP and installing Vista on the same PC, you'll need to copy to an external disk. Click Use a CD or other removable media. Insert a blank disc or connect a USB flash drive or external hard disk, and click the type of media you want to use.

In the next screen, check the correct drive letter is selected for your backup destination. If you want, you can enter a password for the data to prevent anyone else accessing it until you've transferred the files back on to your PC. Click Next again and select what you want to back up. You can back up all personal files and settings for all users, or the files and settings for just one user, or choose what you want to transfer by clicking the Advanced options button.

EXPERT TIP

Don't be tempted to use your Vista licence for more than one computer. It's illegal and may prevent you using the operating system or receiving updates.

The next screen shows a summary of what is backed up. In the bottom right of the window is an estimate of how much space you'll need for the backup. If you run out of room on one volume, the program asks you to insert a new optical disc or connect another external drive to continue the backup, so you can span your data across several volumes.

When you're ready, click the Transfer button. If you do end up using more than one volume to back up your data, label them carefully as you'll have to insert them in the right order when transferring your data back to the Vista installation. Creating the backup may take some time. Once the process is finished, click Close and keep your backup media in a safe place.

2 START VISTA SETUP

Vista's setup program boots straight from the installation DVD. You may need to change the order of your computer's boot devices so it starts the installer rather than your current version of Windows. Your computer or motherboard manual should tell you how to access your PC's BIOS settings, and where to find the boot sequence menu. In the boot menu, make sure your DVD drive is set as the first boot device, followed by the hard disk. Put your Vista DVD in the drive, save the BIOS settings and exit. Your PC will reboot.

Watch your PC's screen carefully as it goes through the boot sequence. Press the spacebar when the 'Press any key to boot from CD or DVD' message appears to enter the setup program.

3 SELECT INSTALL LOCATION

Once Setup has loaded, select your country and input language from the drop-down menu and click Next. Click the Install Now button in the next screen. You'll need to enter your product key, so type it into the box; the installer will automatically add the dashes. As with Windows XP, after 30 days you'll need to activate Vista to continue using it. If you want this to happen as soon as you are online, tick the box at the bottom of the screen. Then click Next. In the following screen, read the licence agreement and tick the box at the bottom to accept the licence, and click Next.

You'll be shown a screen asking whether you want to upgrade to Vista or start a clean installation. Click the Custom (advanced) button. The next screen shows you the hard disks and partitions installed on your PC. If your hard disk doesn't appear, you may need to load a driver for it by clicking the Load Driver button and browsing for the floppy disk, CD, DVD or USB drive containing the driver. The driver should be on a floppy or a CD that came with your motherboard. If you don't have this, you may need to cancel the installation or use another computer to download it from your motherboard manufacturer's website.

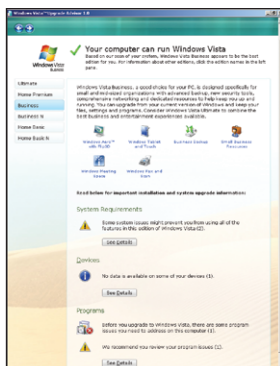
If you try to install Vista on your existing Windows XP partition, the previous installation will be moved to a directory called Windows.old. You'll be able to access your files and documents from this location, but not run your previous operating system. To maximise the amount of disk space available to Vista, we recommend getting rid of your old files by formatting the disk. However, you must back up all your important data using Windows Easy Transfer, as shown above, or another method.

Upgrade Advisor Testing hardware and software compatibility

Microsoft has produced an application called Windows Vista Upgrade Advisor to help you identify any potential compatibility problems before you buy Vista. You can download it from <http://tinyurl.com/o5bq4>. It needs Microsoft's .NET Framework, which you can download from www.tinyurl.com/73qzr.

During the Upgrade Advisor installation, you may be advised that you need the latest version of MSXML. Click the Download and install button then Run, and the latest version installs automatically. After it has finished, restart the Upgrade Advisor installation.

Once installed, close the installer and Upgrade Advisor will run automatically. Before clicking the Start Scan button on the first screen, plug in any external devices you normally use such as printers, scanners and external hard disks, and make sure they are turned on. Click the Start Scan button. While the scan is running, you can read about the different versions of Vista by clicking the buttons at the bottom of the window. Once the scan is finished, Upgrade Advisor displays a summary screen

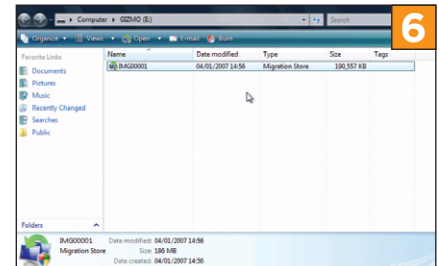
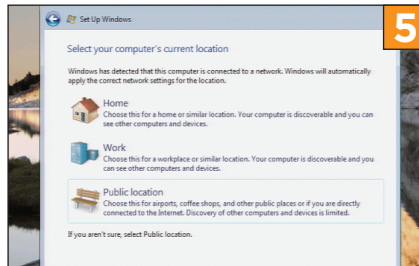
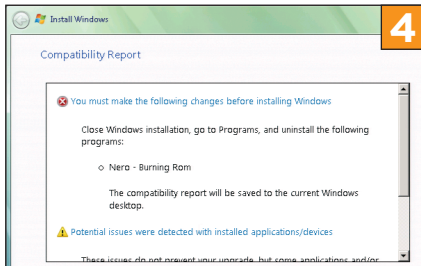
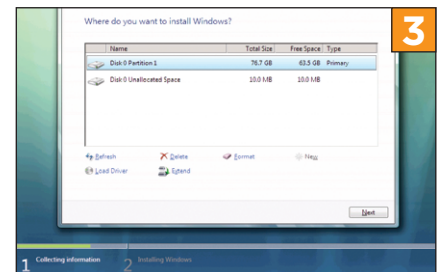
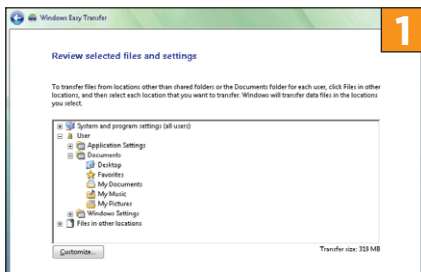


▲ Upgrade Advisor will tell you if your PC can run Vista

telling you whether or not your PC meets the requirements to run Vista. It also recommends a version of Vista for you, based on your hardware and current version of Windows XP.

The Advisor also identifies any potential problems you may have running Vista. These are divided into System Requirements, Devices and Programs. Click the See Details button under each heading to see what the problems may be. System Requirements lists components that may not be up to running Vista, such as a slow processor or not enough RAM or hard disk space. Devices lists any

components that may not have device drivers available for Vista; check the manufacturer's website for each to see if updated Vista drivers are available. Programs lists any installed programs that may not work properly under Vista. Incompatible programs can be left out of a fresh Vista install if you don't need them. If essential software is shown as incompatible, you should check if there's a patch or if there's a new Vista-compatible version.



Click the Drive options (advanced) link. This brings up a new set of options, including tools for partitioning your hard disk or removing any existing, unwanted partitions. If you want to keep your existing partition structure, select the partition containing your Windows installation, click Format and click OK to perform a quick format. You can use the partitioning tools to rearrange the logical drives on your hard disk. Be careful if you aren't familiar with these terms; you could delete information by mistake.

Click Next to begin copying files to your hard disk. If the installation is interrupted, Vista cannot resume from where it left off; you'll have to start the installation from scratch. Vista Setup continues to copy files and will reboot your PC a couple of times. You may want to enter the BIOS settings again to undo any changes you made to the boot devices menu to prevent your PC offering to boot from the Vista DVD.

Once Vista has finished copying files, you'll be shown a screen asking you to choose a username, password and picture. The password is optional, but it's worth setting one if it's a shared PC and you want to keep your files private. If you set a password, you'll also be able to set a password hint. Click Next and choose a name for the PC, which will be used to identify it on your home network. You can also choose a desktop background picture, but you can always change this later. Click Next, and skip to Step 5.

4 INSTALLING OVER XP

If you're installing Vista over your XP installation, we recommend you fully back up your data first using a program such as Windows

Backup. Start Windows XP, insert the Vista DVD and click the Install Now button in the Vista installation program. You'll be asked if you want to go online to get the latest security updates and device drivers, which we recommend as it will help to minimise problems later.

You'll then need to enter your product key into the box; the installer will automatically add the dashes. As with Windows XP, after 30 days you'll need to activate Vista to continue using it. If you want this to happen as soon as you're online, tick the box at the bottom. Then click Next. In the following screen, read and agree to the licence agreement and click Next again.

The installer checks to see if there are any potential compatibility problems with installed applications. If any problems are found, it will split them into applications that may not work properly and those that interfere with Vista's operation and must be uninstalled. Installation can't continue until these critical applications are removed, so quit the installer and uninstall them before starting again. Setup will copy files, and may reboot your PC a couple of times.

5 FINISHING THE INSTALL

You'll be asked about security settings. There are three options. You can use the Windows recommended settings, which automatically installs updates, checks online for help with Windows problems and turns on Internet Explorer's security functions. If you select the second option, Windows will install only important security updates. If you're not sure what level of protection you need, select the third option, which will remind you later to

set your security preferences. We'd recommend as much security as possible, so click the Use recommended settings button.

In the next screen, check the time, date and time zone are correct, then click Next. If you are connected to a network, the installer asks you to choose what kind of network you are on – Home, Office, or Public. It configures your network connection with suitable defaults for the one you select; there is a description under each type to help you. In the next screen, click Start. Windows Vista examines your PC's performance to see if it's suitable for Vista's advanced features, then loads the operating system for the first time.

6 RESTORING TRANSFERRED FILES

If you've upgraded over Windows XP, the installation is finished. However, if you've performed a clean installation, you'll need to reinstall any applications the Vista Upgrade Advisor passed as compatible, and restore your files and settings. Insert the first USB flash drive, external hard disk or optical disc containing your backed-up files. Browse the contents and double-click on the Easy Transfer file. This will be called IMG00001 or similar, and has Migration Store as its Type. Click Continue in the pop-up box.

You'll be asked if you want to use the same username as you did under Windows XP or to type a new one. When you've chosen, click Next. You'll be shown a list of the files and settings that the Easy Transfer program will restore. Click Transfer to begin the process. Once it's finished, a summary screen shows you what's been copied over. Click Close and restart your PC. ☐

Testing and troubleshooting

The first time Vista loads, you'll be shown the Welcome Center. If it isn't displayed, you can find it on the Start menu or type Welcome Center into the Search box on the Start menu.

Check that your PC's hardware is working properly. Click Start, right-click Computer and choose Properties. Then click Device Manager. Windows will ask for permission to continue, so click Continue. Device Manager lists all the devices in your PC, divided into categories such as Display Adaptors and Input Devices. If a device has a question mark next to it, Vista hasn't managed to install a driver for it.

To use Microsoft's device driver search service, right-click on the problem device and click Update Driver in the pop-up menu. Click Search automatically for updated driver software. Windows connects to the internet and tries to find a new driver for your hardware. If this doesn't work, visit the device manufacturer's website and download a Vista driver.

Make sure you've installed a suitable driver for your graphics card and open the Welcome Center, click View computer details, then click Show more details at the top right. The Performance Information and Tools screen

shows you basic information about your PC, including your Windows Experience Index rating. This rates your PC's ability to run Vista. A score of 1 represents the bare minimum specification needed to run Vista. If you click on the Windows Experience Index button, you'll get a breakdown of how your PC's main components score, so you can see where any performance bottlenecks lie.

If you've upgraded over your Windows XP installation, check your applications are working properly. If you have any problems, check the publisher's website for updates.